

8. Flint Peak - FM

Location: Flint Peak, California
Broadcast Facilities on Site: FM
Type of Meter: Narda Production
Date of Measurement: January 7, 1994

Measurement Locations:

- a. Near 1933 datum marker (Measured E field = 26.1 V/m)

TABLE 2
INDUCED BODY CURRENTS DIVIDED BY RF EXPOSURE
AM FREQUENCIES
TWO FEET ON METER

Measurement Location	INDUCED CURRENT FLOW (mA/V/m)			
	Wearing Shoes		Bare Foot	
	Hands At Side	Hands Over Head	Hands At Side	Hands Over Head
1a	0.030	0.050	0.067	0.105
1b	0.034	0.055	0.082	0.123
1c	0.022	0.032	0.041	0.063
1d	0.021	0.013	0.065	0.057
2a	0.036	0.055	0.098	0.153
2b	0.020	0.019	0.068	0.072
2c*	0.260	0.234	0.694	0.694
3a	0.038	0.047	0.156	0.228
3b	0.034	0.050	0.077	0.128
3c	0.031	0.046	0.047	0.091
4a	0.031	0.042	0.094	0.162
ANSI STANDARD CONTROLLED ENVIRONS	200 mA/614 V/m = 0.325 mA/V/m			
ANSI STANDARD UNCONTROLLED ENVIRONS	90 mA/614 V/m = 0.146 mA/V/m			

* Data from this measurement location was viewed as anomalous and was not used in Figure 1.

TABLE 3
INDUCED BODY CURRENTS DIVIDED BY RF EXPOSURE
AM FREQUENCIES
ONE FOOT ON METER

Measurement Location	INDUCED CURRENT FLOW (mA/V/m)			
	Wearing Shoes		Bare Foot	
	Hands At Side	Hands Over Head	Hands At Side	Hands Over Head
1a	0.022	0.037	0.072	0.109
1b	0.025	0.038	0.081	0.121
1c	0.016	0.027	0.042	0.067
1d	0.016	0.013	0.079	0.063
2a	0.022	0.044	0.104	0.156
2b	0.013	0.011	0.066	0.061
2c*	0.199	0.182	0.781	0.694
3a	0.022	0.026	0.110	0.164
3b	0.026	0.036	0.073	0.121
3c	0.024	0.033	0.046	0.085
4a	0.024	0.027	0.094	0.144
ANSI STANDARD CONTROLLED ENVIRONS	100 mA/614 V/m = 0.16 mA/V/m			
ANSI STANDARD UNCONTROLLED ENVIRONS	45 mA/614 V/m = 0.07 mA/V/m			

* Data from this measurement location was viewed as anomalous and was not used in Figure 2.

TABLE 4
INDUCED BODY CURRENTS DIVIDED BY RF EXPOSURE
FM-TV FREQUENCIES
TWO FEET ON METER

Measurement Location	INDUCED CURRENT FLOW (mA/V/m)			
	Wearing Shoes		Bare Foot	
	Hands At Side	Hands Over Head	Hands At Side	Hands Over Head
5a*	1.39	1.27	2.96	2.45
5b	0.50	0.60	1.43	1.68
6a	1.36	1.52	1.97	2.27
6b	1.65	1.44	2.06	1.91
7a	0.60	0.72	0.50	0.44
7b	0.28	0.68	0.60	1.00
7c	0.57	0.73	1.21	1.42
8a	0.67	0.70	1.07	0.96
ANSI STANDARD CONTROLLED ENVIRONS	$200 \text{ mA}/61.4 \text{ V/m} = 3.25 \text{ mA/V/m}$			
ANSI STANDARD UNCONTROLLED ENVIRONS	$90 \text{ mA}/27.5 \text{ V/m} = 3.27 \text{ mA/V/m}$			

* Data from this measurement location was viewed as anomalous and was not used in Figure 3.

TABLE 5
INDUCED BODY CURRENTS DIVIDED BY RF EXPOSURE
FM-TV FREQUENCIES
ONE FOOT ON METER

Measurement Location	INDUCED CURRENT FLOW (mA/V/m)			
	Wearing Shoes		Bare Foot	
	Hands At Side	Hands Over Head	Hands At Side	Hands Over Head
5a*	4.49	4.49	4.69	7.76
5b	0.73	0.80	1.53	1.78
6a	1.62	1.36	2.22	2.68
6b	1.34	1.03	2.27	2.01
7a	0.36	0.54	0.10	0.08
7b	0.16	0.43	0.35	1.00
7c	1.16	0.95	1.67	1.61
8a	0.77	0.73	1.03	0.88
ANSI STANDARD CONTROLLED ENVIRONS	$100 \text{ mA}/61.4 \text{ V/m} = 1.62 \text{ mA/V/m}$			
ANSI STANDARD UNCONTROLLED ENVIRONS	$45 \text{ mA}/27.5 \text{ V/m} = 1.63 \text{ mA/V/m}$			

* Data from this measurement location was viewed as anomalous and was not used in Figure 4.

Figure 1

Relationship Between ANSI/IEEE Maximum Permissible Exposure and Two Foot Induced Current Standards for AM Frequencies

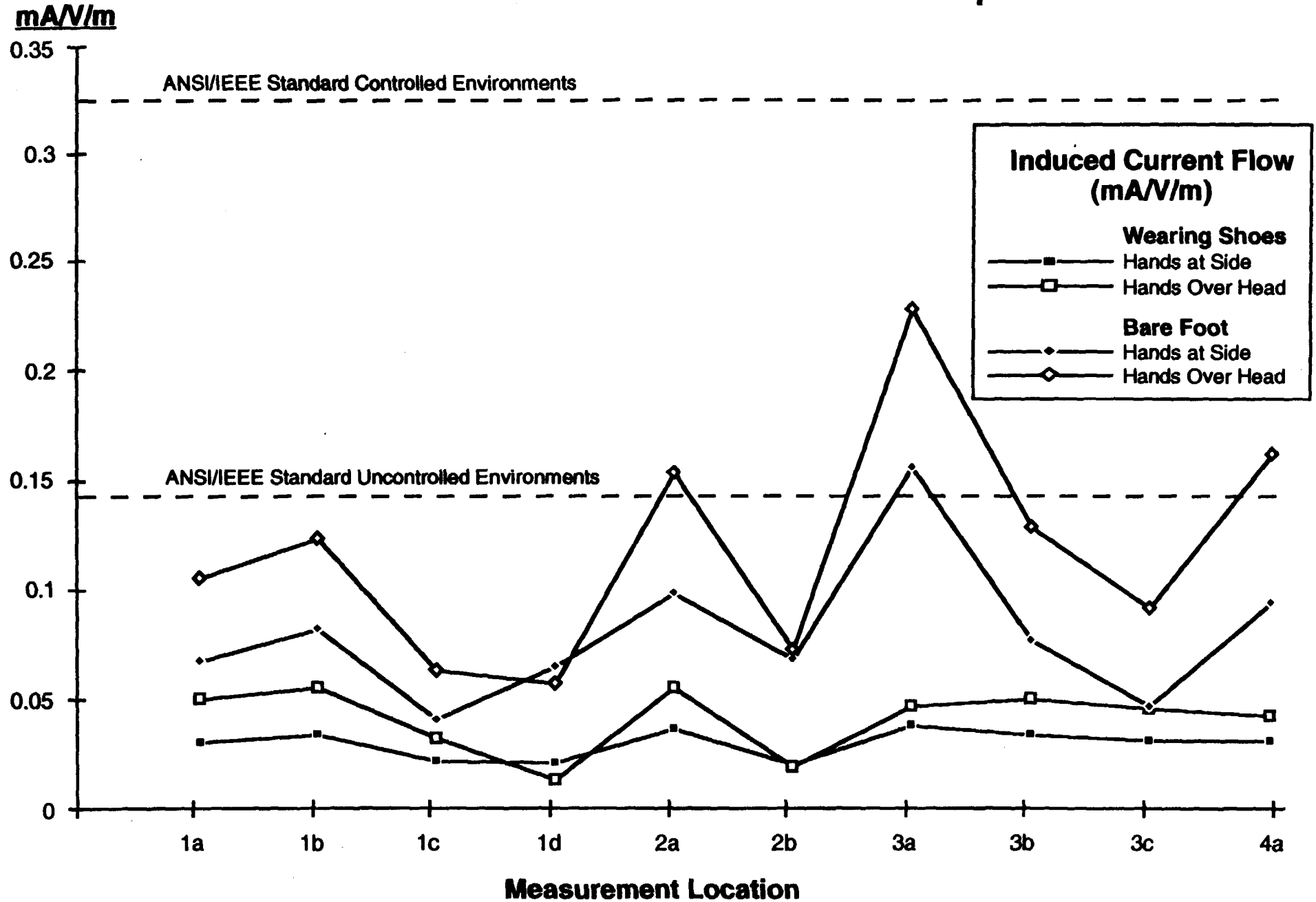


Figure 2

Relationship Between ANSI/IEEE Maximum Permissible Exposure and One Foot Induced Current Standards for AM Frequencies

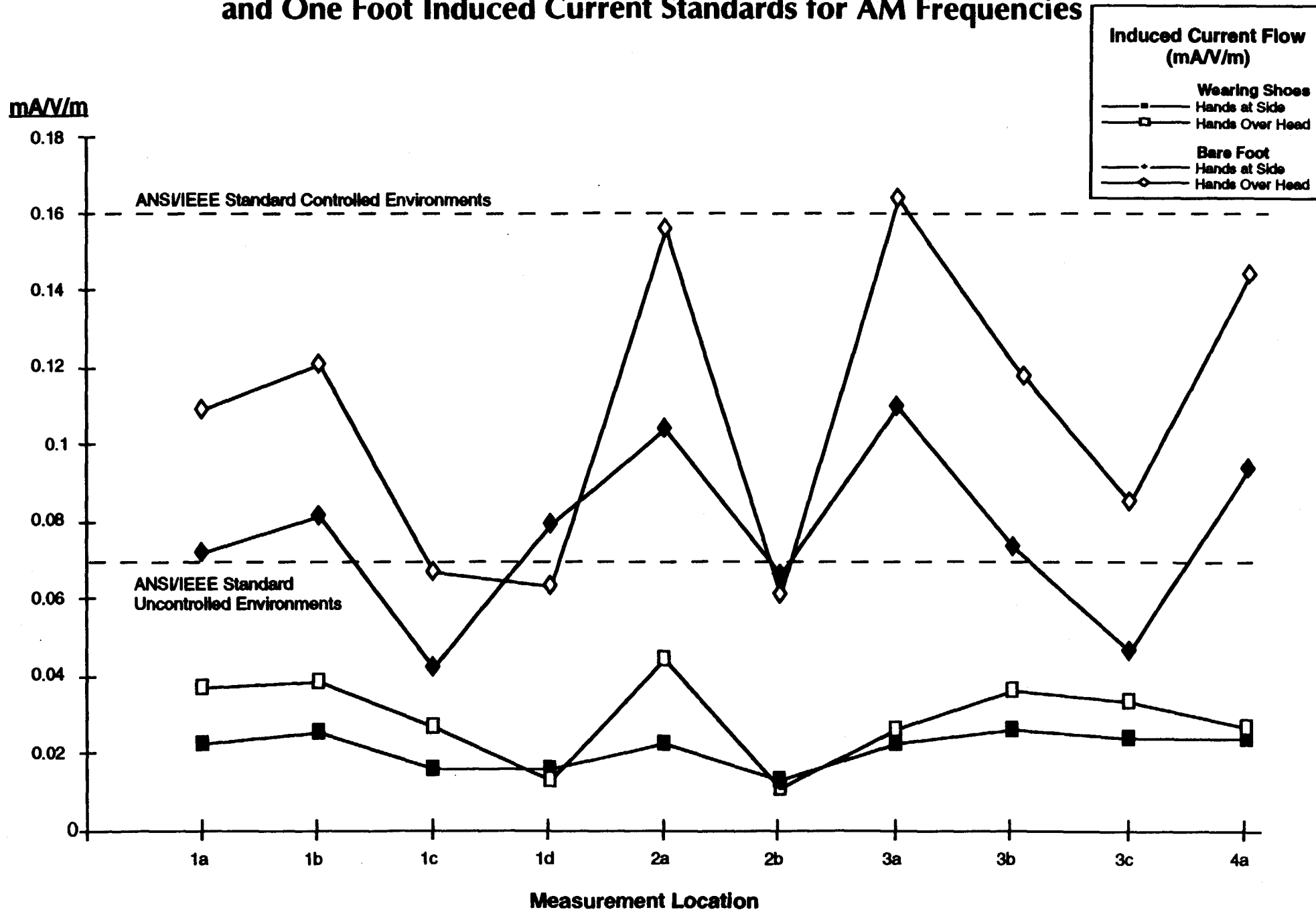


Figure 3

**Relationship Between ANSI/IEEE Maximum Permissible Exposure
and Two Foot Induced Current Standards for FM/TV Frequencies**

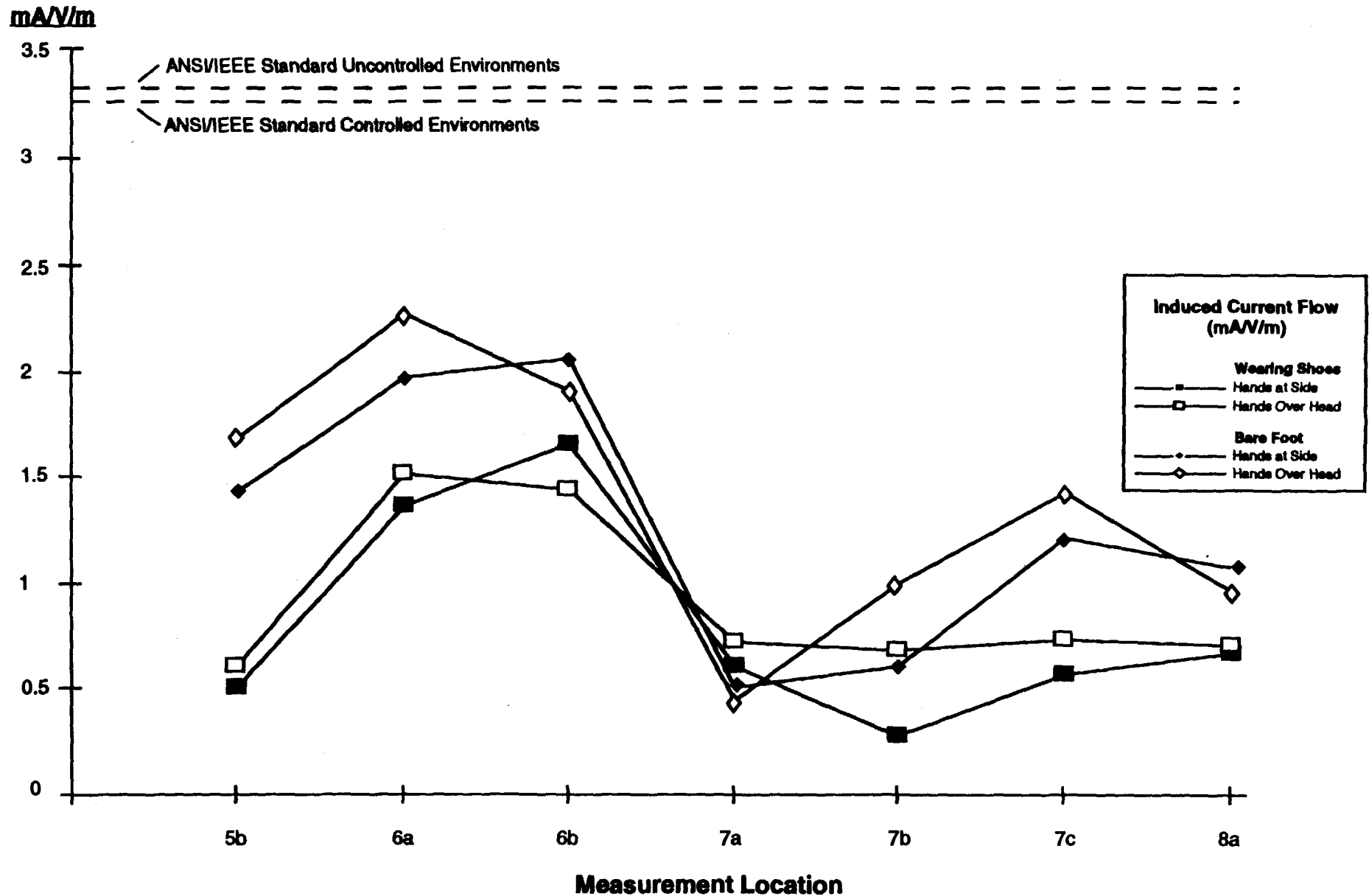
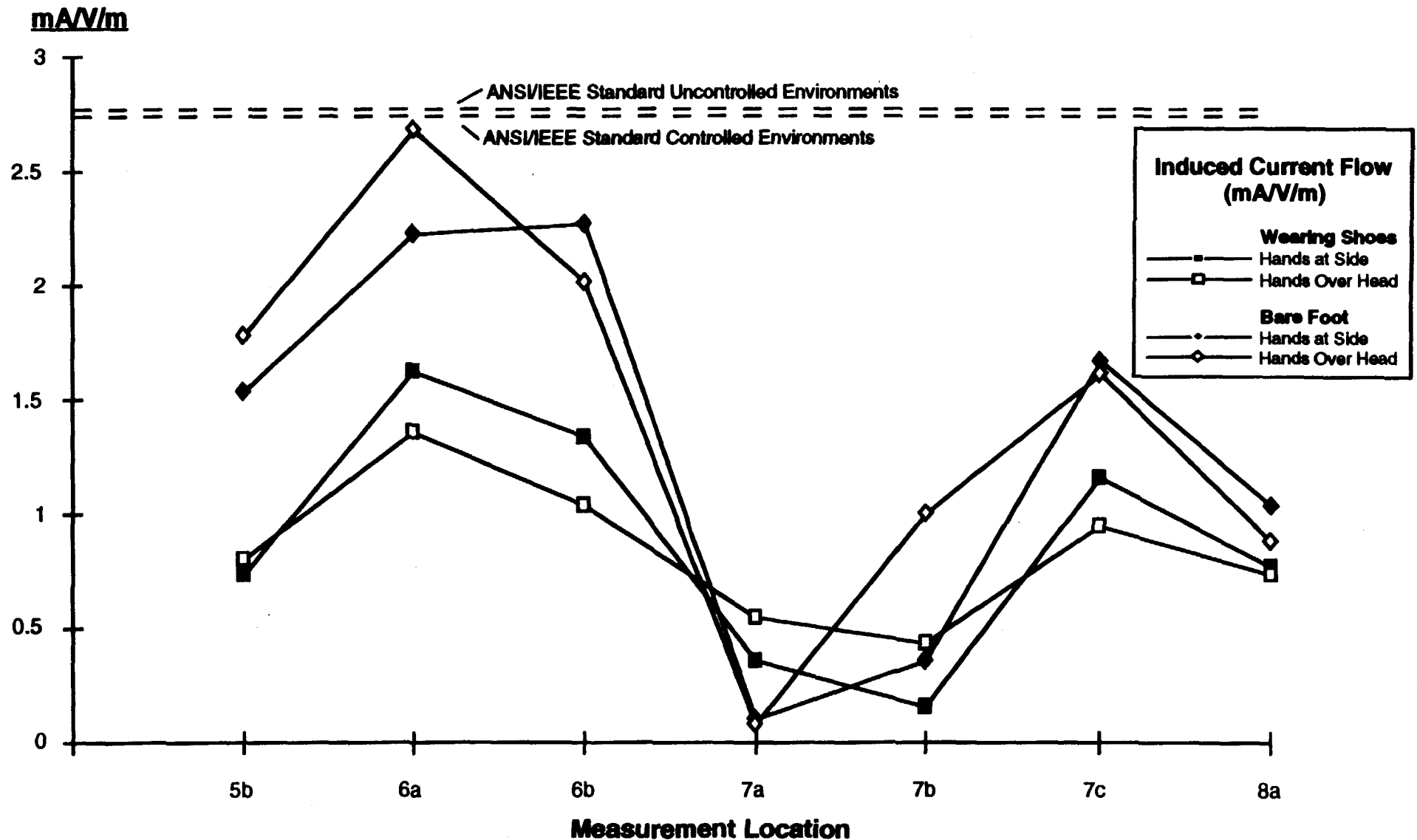


Figure 4

Relationship Between ANSI/IEEE Maximum Permissible Exposure and One Foot Induced Current Standards for FM/TV Frequencies

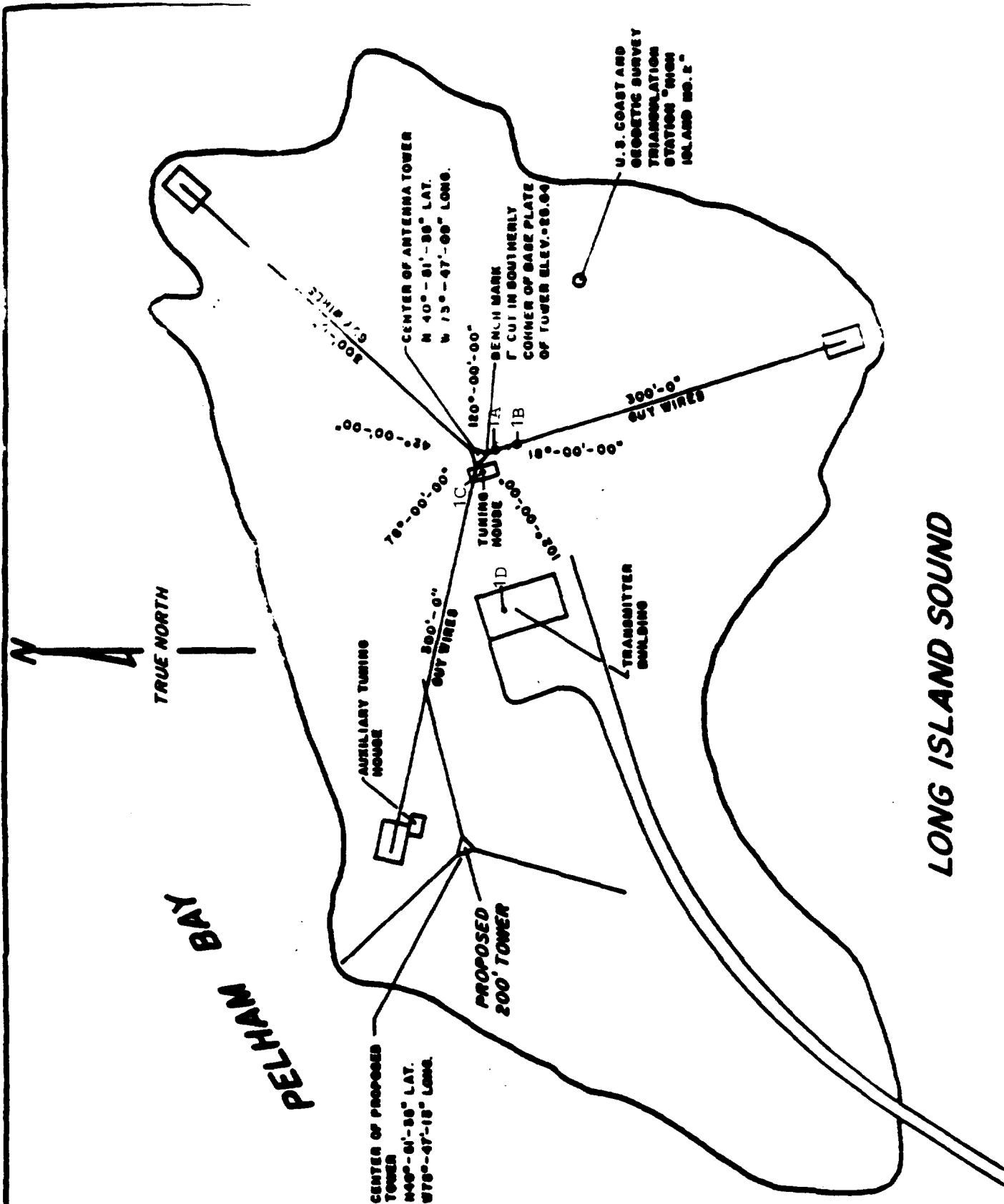


B

APPENDIX B

SITE SPECIFIC DATA

SITE 1: HIGH ISLAND



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PROJECT TITLE
WCBS / WNBC
AUXILIARY ANTENNA

SUBJECT
PLAT PLAN

ENG. W. J. MCCARREN
DES. F. J. PISANO 8-30-

CBS RADIO NETWORK

51 WEST 52 STREET, NEW YORK, NEW YORK 10019

ENGINEERING DEPARTMENT

SCALE
1" = 100'-0"

PROJECT NO.
E-77-110

PAGE NO.
4

**LIST OF
TRANSMITTING FACILITIES
AT
HIGH ISLAND**

<u>CALL SIGN</u>	<u>FREQUENCY</u>	<u>POWER-DIRECTIONALITY</u>
WCBS (AM)	880 kHz	50 kw non-directional
WFAN (AM)	660 kHz	50 kw non-directional

HIGH ISLAND

Measurement Locations:

1a: Inside Tower Fence

Table 1A-1

EXPOSURE MEASUREMENT
 LOCATION:
 HIGH ISLAND INSIDE TOWER FENCE

HEIGHT (in feet)	EXPOSURE (V^2/m^2)
0.5	6,000
1.0	15,000
1.5	35,000
2.0	65,000
2.5	95,000
3.0	150,000
3.5	400,000
4.0	450,000
4.5	550,000
5.0	720,000
5.5	820,000
6.0	<u>1,000,000</u>
AVERAGE	358,833 V^2/m^2
EQUIVALENT TO	599 V/m

Table 1A-2

INDUCED BODY CURRENT MEASUREMENTS

LOCATION:

HIGH ISLAND INSIDE TOWER FENCE
(RF FIELD = 599 VOLTS PER METER)

	WEARING SHOES & SOCKS		BARE FEET	
	HANDS AT SIDE	HANDS OVER HEAD	HANDS AT SIDE	HANDS OVER HEAD
Both Feet On Meter	18 mA	30 mA	40 mA	63 mA
One Foot On Meter	13 mA	22 mA	43 mA	65 mA

Table 1A-3

INDUCED BODY CURRENT MEASUREMENTS
DIVIDED BY RF EXPOSURE

	SHOES & SOCKS		BARE FEET	
	HANDS AT SIDE	HANDS OVER HEAD	HANDS AT SIDE	HANDS OVER HEAD
2 Feet On Meter	.030 mA/V/m	.050 mA/V/m	.067 mA/V/m	.105 mA/V/m
1 Foot On Meter	.022 mA/V/m	.037 mA/V/m	.072 mA/V/m	.109 mA/V/m

HIGH ISLAND

Measurement Locations:

1b: 15 Feet From Tower Fence

Table 1B-1

EXPOSURE MEASUREMENT
LOCATION: HIGH ISLAND
15 FEET FROM TOWER FENCE

HEIGHT (in feet)	EXPOSURE (V^2/m^2)
0.5	4,500
1.0	7,000
1.5	12,000
2.0	20,000
2.5	40,000
3.0	57,000
3.5	75,000
4.0	95,000
4.5	160,000
5.0	350,000
5.5	330,000
6.0	<u>450,000</u>
AVERAGE	133,375 V^2/m^2
EQUIVALENT TO	365 V/m

Table 1B-2

INDUCED BODY CURRENT MEASUREMENTS
15 FEET FROM FENCE
LOCATION:
(RF FIELD = 365 VOLTS PER METER)

	WEARING SHOES & SOCKS		BARE FEET	
	HANDS AT SIDE	HANDS OVER HEAD	HANDS AT SIDE	HANDS OVER HEAD
Both Feet On Meter	12.5 mA	20 mA	30 mA	45 mA
One Foot On Meter	9 mA	14 mA	29.5 mA	44 mA

Table 1B-3

INDUCED BODY CURRENT MEASUREMENTS
DIVIDED BY RF EXPOSURE

	SHOES & SOCKS		BARE FEET	
	HANDS AT SIDE	HANDS OVER HEAD	HANDS AT SIDE	HANDS OVER HEAD
2 Feet On Meter	.034 mA/V/m	.055 mA/V/m	.082 mA/V/m	.123 mA/V/m
1 Foot On Meter	.025 mA/V/m	.038 mA/V/m	.081 mA/V/m	.121 mA/V/m

HIGH ISLAND

Measurement Locations:

1c: Inside WCBS-WFAN Doghouse

Table 1C-1

EXPOSURE MEASUREMENT
 LOCATION: HIGH ISLAND
 INSIDE WCBS - WFAN DOG HOUSE

HEIGHT (in feet)	EXPOSURE (V^2/m^2)
0.5	35,000
1.0	50,000
1.5	75,000
2.0	150,000
2.5	330,000
3.0	530,000
3.5	840,000
4.0	1,500,000
4.5	3,600,000
5.0	4,200,000
5.5	5,500,000
6.0	<u>7,500,000</u>
AVERAGE	2,025,833 V^2/m^2
EQUIVALENT TO	1423 V/m

Table 1C-2

INDUCED BODY CURRENT MEASUREMENTS
 INSIDE WCBS - WFAN DOG HOUSE
 LOCATION:
 (RF FIELD = 1,423 VOLTS PER METER)

	WEARING SHOES & SOCKS		BARE FEET	
	HANDS AT SIDE	HANDS OVER HEAD	HANDS AT SIDE	HANDS OVER HEAD
Both Feet On Meter	31 mA	45 mA	58 mA	90 mA
One Foot On Meter	23 mA	38 mA	60 mA	95 mA